

### **ABSTRACT OF THE DISCLOSURE**

A device for carrying out chemical reactions and processes in high-frequency fields, comprises a high-frequency chamber 2 for irradiating a solid, liquid or gaseous substance while under pressure with at least one radiation source and a reactor for exposing to a high-frequency field. The reactor being connectively coupled to the upper wall 4 of the high-frequency chamber 2 through a sealable connection 3. Rail elements 5 are provided around the reactor, and configured to form a pressure-resistant cage. The rail elements 5 each have a guide 11 for holding a crown-shaped holder 12. The holder 12 is fixed in its position by the guides 11 of the rail elements 5. Multiple reaction chambers can be incorporated as a batch reactor system.